INDEX OF SURGICAL PROGRESS.

GENERAL SURGERY.

I. On Tubercularization of Wounds. By Prof. KRASKE (Freiburg). Local relapse after operations for tubercular disease is well known; not so the fresh infection of a non-tubercular wound; one such possible case was published by König, but it was not conclusive. Kraske presents two cases which he considers demonstrative.

1. Boy, æt. 11. Parents and a brother healthy, sister æt. 15 years consumptive. Osteomyelitis of right femur. Two years later there remained a couple of fistulæ; one of these was opened and some bone chiseled off (no sequestrum) and the granulations removed. The other fistula then closed. Primary union of the incision down to the drainage opening. Discharged in three weeks with a nicely granulating surface. Readmitted seven months later. The wound had not healed—on the contrary there were two additional openings with fungous cheesy granulations. The appearance and secretion of the wound were much worse. It had been dressed daily in a small room where lay his sister, who recently died of tuberculosis; he slept and his bandages were kept in the same chamber. The healed fistula had remained healed. The bone to the extent of the defect made at the first operation and a depth of $^1/_2$ to 1 ctm. was carious. That it was a pronounced tuberculosis was clear. Microscopical examination of the granulations and bone showed numerous miliary tubercles and after much trouble also scattering but definite bacilli. The sore was dressed with iodoform gauze and the patient dismissed in six to seven weeks, the wound not quite healed.

2. Boy æt. 10. Mother and maternal aunt and grandparents died of phthisis. Osteomyelitis of left femur in Nov., 1884; admitted to clinic in June, 1885. Internal organs healthy. Leg shortened 7 ctm. by an angle in the femur—evidently resulting from a reunited fracture.

The bone at this point was much enlarged; two fistulæ, one on the outside and one on the inside. Sequestrum of bone could be detected. Operation under constriction. Exquisite fungous cheesy granulations extended about $2^1/_2$ ctm. deep along the inner fistula; these were recognized macroscopically and proven microscopically to be tubercular (bacilli). Material from other parts of the tract and the external fistula was free from bacilli. Further course of the case favorable, correcting the deformity was left for a later operation. The evidence in favor of his views of the two cases, as already indicated, is then reviewed and strengthened. K. raises the question whether the previous osteomyelitic infection did not exert some special influence favoring the development of tuberculosis in the wound.—*Centbl. f. Chirg.* 1885. No. 47.

W. Browning (Brooklyn).

II. Hydronaphthol; a New Antiseptic. By G. R. Fowler, M.D. (Brooklyn, N. Y.) Hydronaphthol, a member of the phenol series and represented by the formula $C_{20}H_7O_3HO$, has been used successfully as an antiseptic, particularly as a substitute for carbolic acid. The writer finds it to be non-irritant, non-poisonous, non-corrosive, non-volatile at ordinary temperatures, and second only, as an antiseptic, to corrosive sublimate. From a considerable number of experiments upon its action upon beef solutions it was concluded (1) to have failed to disinfect decomposed beef tea, containing pathogenic organisms and spores, when present in 0.5 per cent; (2) not to prove germicidal to pure anthrax, pure subtilis and pure micrococci in the same strength; but (3) as an antiseptic it proved to be active in arresting the development of bacteria in the proportion of 1 to 6000 and failed only when the 1 to 8000 solution was reached. Like results were obtained in a series of experiments upon fungi in an incubation liquid composed of grape sugar, potassium phosphate, ammonium nitrate and distilled water, a 1 to 2000 solution completely checking the fermentation of yeast. A solution for surgical use, 1 to 1100, is made by adding a sufficient quantity to a teacupful of hot water to supersaturate it, producing a milky mixture; enough water at the ordinary temperature is then added to this to make a clear solution. Silk, catgut, sponges, drains, etc., are first sterilized by immersion in a mercuric chloride solution and then preserved in a hydronaphthol solution. Dressings are prepared by saturation with a 1 to 500 solution in which mercuric chloride is dissolved in the same proportion, the latter, by its germicidal action, destroying any possible source of infection and the former as a permanent antiseptic: The power of hydronaphthol as an antiseptic is shown by a series of eleven cases, illustrating its effect, and the paper is closed by a detailed description of the methods of preparation of the various articles in which advantage is taken of its antiseptic properties.—*N. Y. Med. Jour.* 1885. Oct. 3, 10, 24, Dec. 5.

III. **Theine, a New Analgesic.** By T. J. Mays, M.D., (Philadelphia). Theine is the active principle of the leaves of Chinese tea, and in physiological doses, it paralyzes sensation before motion, impairs sensibility from the centre to the periphery and produces convulsions which are spinal, not cerebral. The author concludes from its physiological action and its action in two cases of obstinate neuralgia, which he quotes, that it is a powerful anodyne which produces none of the intoxication of the higher nerve centres so common with morphia and all other agents belonging to this class. Its influence is quick and persistent, manifesting an almost exclusive affinity for the sensory nerves and in $^1/_{10}$, $^1/_5$ and even $^1/_3$ grain doses it is entirely free from dangerous consequences and may be exhibited hypodermically in a 1 per cent solution.—*Med. News.* 1885. Dec. 12.

J. E. Pilcher (U. S. Army).

IV. **Poisoning with Fibrine Ferment and Its Relations to Thrombosis and Embolism.** By Dr. E. von Duering (Erlangen). The object of this interesting paper, written at the suggestion of Prof. Heineke, of Erlangen, by his former assistant, was to determine, by means of experimental evidence, whether the ferment forming fibrin in the blood can pass from an extravasation through the walls of healthy vessels and there effect local thrombosis.

The question is answered in the affirmative and the following conclusions arrived at:

1. The fibrin ferment contained in coagulating extravasations of blood enters the vessels of the region affected, by diffusion. 2. For this reason extensive intravascular coagulation takes place as soon as

the blood current in the vessels is impeded or interrupted. 3. If the blood-current be not impeded small coagula are formed in the coursing blood, and, being swept away by the current, finally form innumerable emboli in the capillaries and minute arteries of every organ, thus causing the condition known to the pathological anatomist as fibrin-poisoning. 4. But in those cases as well where thromboses are locally formed, a number of minute particles are torn away from the coagulum by the blood-current and lodged in the capillaries, so that even in these cases general symptoms of fibrin-intoxication are not wanting.

In the first part of the paper the author gives a short résumé of Alexander Schmidt's theory of fibrin-formation, which he adopts, refuting Bizzozero, and reviews Angerer's investigations.

In the second part he details some experiments which he conducted by ligaturing the various vessels and making perivascular injections of blood containing ferment, or by directly wounding the arteries subcutaneously. He found that even in exsected ligatured arteries the blood remained fluid for a long time. When these were immersed in blood-serum the coagulation took place sooner, although putrefactive processes here play a part. Injuries done to the vessels always caused coagulation. Perivascular injections of blood were followed by no local disturbances unless ligatures were applied to the vessels or a tourniquet to the limb. These results explain why, after surgical ligature of a main artery, gangrene of the limb is a much more frequent occurrence when hæmorrhage is present.

Lastly, the author argues from numerous microscopical examinations of sections through almost all the internal organs, that capillary embolisms constitute the essential conditions of fibrin-poisoning, thus rejecting Koehler's theory of capillary thrombosis.

The paper is nearly fifty pages in length, eighteen of which are taken up with descriptions of experiments.—*Deutsch. Zeitsch. f. Chir.* Vol. 22. Hft. 5. Oct. 6, 1885.

V. On the Antiseptic Properties of Subnitrate of Bismuth and Some Other Substances. By Dr. Carl Schuler. Acting upon a suggestion made by Prof. Kocher, of Bern, who had found iodoform powder too dangerous a dressing to be used freely on wounds, the author undertook a series of experiments with a view to finding a substitute for iodoform, which should possess similar antiseptic powers and yet be harmless. The first experiments consisted simply in rubbing different chemical substances upon pieces of fresh meat, and then determining by means of their odor how long they remained sweet. The powders used were alum, iodoform, burnt magnesia, carbonate of magnesia, subnitrate of bismuth and zinc oxide; lime water, oil of juniper and other solutions were also used. His further experiments were soon limited to subnitrate of bismuth, zinc oxide and iodoform, the first of which subsequently absorbed his entire attention.

The accounts of these latter experiments alone fill nearly eleven pages, the action of the bismuth upon meat, fresh pieces of pancreas and gelatine being separately considered. Development of bacteria was not observed for several days in these experiments, and other signs of putrefaction did not appear for several subsequent days. The development of bacteria on gelatine soils was prevented by the addition of 1 per cent of bismuth.

The author gives the following *résumé* of the clinical aspect of the subject, although the paper contains no clinical data nor cases:

1. Subnitrate of bismuth possesses antiseptic properties at least equal to those of iodoform. 2. No poisonous effects are to be apprehended as in the employment of iodoform. 3. The subnitrate of bismuth, being a chemically indifferent substance, does not irritate the wounds; secretion is diminished. 4. Its action is very prolonged, though not vigorous, so that the dressings do not require to be frequently changed, and rest is insured for the wounds. 5. There is no action at a distance, nor does any specific effect attach to it. 6. It does not afford protection against erysipelas and other wound diseases, at least no more than iodoform. 7. It is no disinfectant, but as an antiseptic it keeps the wounds pure. 8. All wounds capable of healing by first intention can do so when dressed with bismuth. 9. It also represents an excellent material for forming scabs under which epidermis can grow over the wound. Its use on granulating wounds has not, however, been sufficiently studied as yet.

As an appendix to this paper some remarks are given of Prof.

Langhan's, of Berne, on the pathological changes in the kidneys and intestines in animals poisoned by subnitrate of bismuth.

Metallic deposits occur in the tissues, occasioning necrosis and sloughing.—*Deutsch. Zeitschr. f. Chir.* Vol. 22. Hft. 5 and 6. Oct. 6, 1885.

W. VAN ARSDALE (New York).

NERVOUS AND VASCULAR SYSTEMS.

I. Statistics of Aneurysms, Especially of the Aorta, and on Causes of Same. By Dr. C. M. RICHTER. (San Francisco.) Attention is first called to the recognized frequency of aneurysm in San Francisco, and doubtless in all California. The foreign element in the population nearly equaled the native in 1870; it had increased somewhat relatively in 1880. Since few but strong people, and those having some little means went there before the railroad was built—the same holds largely still—and the climate is favorable, the mortality, exclusive of the Chinese, is very low. But owing to the higher wages and favorable prices of food—both of which, in comparison with London and New York, are shown by tables—more work is required and can be done than in most older localities. Longshoremen especially show this; they get high wages, are frequently subject to excessive and prolonged strain, such as carrying heavy loads, etc. They furnish the largest contingent of aortic aneurysms. Again, drunkenness is very prevalent. Berlin's average for five years gave 30 deaths from alcoholism in 1,000,000 deaths; Cincinnati gave 150; San Francicisco 280. Of the fifty-one persons dying from alcoholism in San Francisco in 1884, thirty were foreigners and seventeen were from the Western States.

In 1867 Soule published thirty cases of aortic aneurysm from the City Hospital (occurring within two and a half years); of these 24 were foreigners; most of them were drinkers, and either sailors, longshoremen or soldiers. But one was married, and there was one woman—the only one of the thirty born in California. The aortic arch was the seat in one-half, the descending aorta in one-third, and the abdominal in one-sixth. After Soule came Gibbons, who calculated that there were 150 deaths from aortic aneurysm amongst 10,000 in San

Francisco, while Philadelphia showed but 6, and Boston and England 9. Soule in 1868 calculated a yearly average of 42, or 1 death from aortic aneurysm to 3,000 inhabitants, while at the same time there was but 1 to 27,000 in New York.

From R.'s large number of comparative tables and remarks a few only can be indicated.

In San Francisco the ascending aorta is rarely affected, in contrast to English experience (cf. statistics of Myers, *Lancet*, 1869), a peculiarity noticed by Soule. For nineteen years (1865–1884) the number of deaths from aortic aneurysm has remained in a general way constant; total 644, averaging nearly thirty-four yearly, whilst deaths from other circulatory diseases have increased nearly twice as fast as the population. The ratio of aneurysms in women to men was for eighteen years as 7.9 to 92.1.

Berlin in ten years did not show fifty fatal cases of aneurysms, while San Francisco, with one-fifth the population, has as many in one year. Hence, e. g., the Germans can not be assumed to bring any race predisposition with them. Again, while in Berlin the diseases of the circulatory system gradually increase in mortality statistics up to the seventh decade of life, in San Francisco they correspond to the aneurysms in frequency. Hence R. concludes that some forms of heart and circulatory diseases bear a close relation to the frequency of aneurysms.

Comparison with Cincinnati presents a very similar showing to that with Berlin.

He finds that those performing the severest bodily labor were one-fourth natives, three-fourths foreigners—the same relation as in the cases of aneurysms. Rheumatism and gout are largely blamed for the frequency of aneurysms in England, and both these troubles are frequent in San Francisco. Yet, from the fact that they are not as frequent causes of death, they do not appear to be very active causes of aneurysm.

He makes the following points:

1. Aneurysm of the aorta is a specific disease of the working class.

2. A workman runs in danger of acquiring an aortic aneurysm if he fills the conditions which produce endarteritis.

3. The chief causes of endarteritis are chronic alcoholism and continued excessive muscular exertion.

4. Endarteritis is probably, with rare exceptions, the primary cause of aortic aneurysm.

5. More aortic aneurysms appear in this country having a relatively larger number of fatal cases of vascular disease.

6. Prophylaxis consists in an oversight of the course of life of those performing severe bodily labor.

7. Various nationalities, under the same conditions, are equally disposed to the acquisition of diseases of the circulatory system.

8. In respect to age, the number of deaths from vascular diseases runs nearly parallel to that from aneurysms, and is largest at the same decades of life.

9. The largest number of fatal cases from aneurysm in general as well as aortic aneurysm in particular is observed in the fifth decade of life, then in the fourth and sixth.

10. Of the four portions of the aorta the arcus shows the most aneurysms, next the descending aorta, then the abdominal, and finally the ascending.—*Arch. f. klin. Chirg.* 1885. Bd. 32. Hft. III.

HEAD AND NECK.

I. Phosphorus-Necrosis of the Jaws. By Dr. J. Ewing Mears. (Philadelphia.) A systematic consideration of the subject of the peculiar necrosis of the jaws to which operatives in match factories are subject, including successively the literature, etiology, pathology, symptomatology and treatment of the disease. The conclusions of the author are as follows:

1. The disease is a local expression of the constitutional condition produced by the inhalation of the vapor of phosphorus, and by particles of the agent taken into the system with the food by operatives in match factories who do not give proper attention to cleanliness of the hands.

2. The introduction of the agent into the system is, as a rule, very gradual, and in such small quantities as to avoid the production of symptoms of acute poisoning In this way the chronic toxic condition of the system is induced, characterized chiefly by disintegration of the red blood-corpuscles and fatty degeneration of the arterial coats.

3. The toxic condition precedes the jaw disease, as is shown by the fact that the disease does not attack operatives recently exposed to the action of the agent, but those who have been exposed for a period of years.

4. Examination of the teeth of operatives has shown that many who have caries, and have returned to work immediately after the extraction of teeth, have enjoyed immunity from the disease, showing that the agent had not attacked the periosteal tissue thus exposed. This was further shown by the fact that in one case necrosis did not appear until three months after labor in the factory had ceased.

5. Individuals vary in their susceptibility to the action of the poison; for this reason many suffer immediately with acute symptoms, such as nausea, vomiting, etc., and are compelled to abandon work in the factories.

6. The conditions under which experiments have been made on animals to prove the absence of the disease until exposure of the periosteum and perialveolar tissue was effected are not similar to those to which operatives in match factories are subjected.

7. Treatment of the disease in the primary stage is efficient and prevents its progress.

8. The antidotal powers of turpentine have been established.

9. The disease is to be prevented among operatives by the adoption of thorough methods of ventilation, stringent rules with regard to cleanliness, and the free disengagement of the vapor of turpentine in all the apartments of factories in which the fumes of phosphorus escape.—*Trans. Amer. Surg. Assoc.* Vol. III. 1885.

J. E. Pilcher, (U. S. Army).

II. On Dead Osteoma of the Nasal and Frontal Sinuses. By Dr. H. Tillmanns. (Leipzig.) Besides a review of the subject, T. gives the following case: Woman æt. 53, who had long suffered from headache, especially in the region of her later trouble. For the last eight years a slowly increasing prominence in region of left frontal sinus. This had led to prominence and blindness of the left eye. A fistula had existed for six months on the edge of the left orbit. The nose had been almost occluded for years. The left bulbus was now immovable and the seat of panophthalmitis. A sound passed through the mentioned fistula touched dead bone. Polypous formations in the left nostril; right nostril filled by a bony concrement. The eye was first enucleated under the supposition that the frontal tumor had perforated the orbita; this had, however, not occurred. Two weeks later the frontal sinus was opened; it was the size of a goose egg, and contained two free osseous balls, one size of a pigeon's egg, the other of a small walnut. The site of a former pedicle was visible on each, as likewise the point of their original attachment, where the ethmoid bone joins the sinus wall. They had developed from the ethmoid. The sinus walls were much attenuated, but not perforated. Several bits of necrotic bone were removed and a free communication with the nose established. Six days later he slit up the right nostril to the root and removed the nasal osteoma. This had originated also from the ethmoid bone, and showed a former pedicle. Subsequent plastic operation for the frontal defect. Good result—the only disfigurement being the loss of the eye. The nasal osteoma weighed, when dried, 47.1 grms.; the frontal weighed 24.85 resp. 7.6 grms. T. inclines to the opinion that most at least of these growths have originally a bony pedicle.—*Arch. f. klin. Chirg.* 1885. Bd. 32. Hft. III.

III. On Resection of Goitre, with Remarks on the Conditions Consequent to Total Extirpation of the Thyroid Gland. By S. MIKULICZ (Cracow). The published cases of so-called cachexia strumapriva already number 35, to which M. adds another. But there are other evils which may result from total extirpation of the thyroid. Weiss, two years since, found thirteen cases of tetany, and M. has had four cases amongst seven operations. Wiebrect's statistics, however, showed but three deaths from tetany. Again, M. cites three cases—two of his own and one of Obalinski's—where epileptic convulsions followed. A fourth evil is paralysis of laryngeal muscles.[1]

Hence M. has in eight cases in the last one and a half years practiced what he calls a resection of the goitre. He illustrates with a case. Young peasant æt. 16 years. Bad goitre. He had hoped to spare the right lobe, but since it proved to be partly substernal, he concluded to remove by resection. The growth was first freed as far as possible with blunt instruments; ligature of superior thyroid artery and vein and of the superficial branches to the lower horn. The lobe was now cut with scissors from the ant. resp. lateral surface of trachea, care being taken not to reach the recurrent nerve. At length the goitre only hung from the angle between trachea and œsophagus, just over the recurrent nerve and thyroid artery. This remainder, the hilus of the gland, he treated as he would a short, thick ovarian pedicle. An assistant compressed the entering vessels; the pedicle was divided longitudinally into several parts, each of which was seized with hæmostatic forceps and tied with catgut. It was then cut away, leaving stumps 5 to 10 ctm. long; scarcely any bleeding. The remainder of the gland contracted to about the size of a chestnut. Primary union. Discharged in ten days. Reports up to seven months after the operation show an entirely satisfactory result.

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[1] Cf. Jankowski. *Annals.* 1885. Dec. P. 504.

In five cases one lobe was extirpated, the other resected; in one both lobes were resected, and in two only the one goitrous lobe was resected. One was a case of Graves' disease; here rapid improvement followed. As yet he has observed no untoward consequences.—*Centbl. f. Chirurg.* 1885. No. 51. Dec. 19.

GENITO-URINARY ORGANS.

I. On Displacement of the Urinary Bladder by Tamponing the Rectum. By Dr. FEHLEISEN (Berlin). In 1878 Braune and Garson published the results of some experiments with this procedure—from frozen median sections. The former called attention especially to the effect on the urethra, the upward displacement of its inner orifice, etc.; the latter (Edinbg. Med. Jrnl. for Oct., 1878) considered the like effect on the prævesical fold of the peritoneum. Petersen (1880) who has been given credit for this method, seems to have worked it out independently. Its principal application is in suprapubic lithotomy. Mannheim (1884), working under Bergmann, studied it on cadavers of children from 2$^1/_4$ to 8 years old. F. was also instigated to his work by von Bergmann. He prepared frozen sections, placed a glass plate on the flat surface and marked out the exact relations. Four large colored lithographs illustrate his results. In the first the rectum was empty, the bladder moderately filled—300 ccm. fluid. The bladder here has a spherical form; the internal urethral orifice is 1 ctm. above and 4 ctm. behind the lower border of the symphysis; the fundus of the bladder lies about horizontal about on a level with which is the lowest point of Douglas's pouch; the intestines are 4 ctm. above the upper symphysic border, while the prævesical peritoneal fold is but $^1/_2$ ctm. above.

The second plate shows the displacement of the bladder on filling the rectum—the bladder containing 200 ccm. of fluid and the rectum a tampon of 480 ccm., formed by a rubber bag drawn over the end of a stomach tube and fastened some 8 to 10 ctm. from its tip. Such a tampon he finds better than a colpeurynter, both for experiment and practice. The bladder is now not round as in the former case, but in section approaches a pentagon whose base is the fundus, the other four limiting sides being the symphysis, anterior abdominal wall, small intestines and rectum. The fundus vesicæ slopes down anteriorly at about half a right angle. The internal urethral orifice stands 4 ctm. above, but scarcely 1 ctm. behind the lower symphysic border. The lower edge of the posterior peritoneal fold is about 5 ctm. above a horizontal, touching the lower border of the symphysis. In front the intestines and prævesical fold are 4 ctm. above the upper symphysic border. While in the first it would be impossible to tap the bladder without endangering the peritoneum, in this second there is ample room for a sectio alta.

To show how little the position of the peritoneum is affected by simple charging of the bladder he made a preparation where about as much fluid was injected into the bladder (630 ccm.) as in the last case into bladder and rectum together.

Again, the bladder is circular in section. The first fold of peritoneum is 2 ctm., the intestines $4^1/_2$ ctm. above the symphysis. The bladder has extended rather back and downwards than upwards. The internal urethral orifice is on a level with and $4^1/_2$ ctm. posterior to the lower edge of the symphysis. The prostatic portion of the urethra lies almost horizontal.

The next plate shows both bladder and rectum quite full, containing 420 resp. 500 ccm. Peritoneal fold and intestines are this time $8^1/_2$ ctm. above symphysis. The form of the bladder is very irregular; the internal urethral orifice lies scarcely 1 ctm. behind the symphysis and about $2^1/_2$ ctm. higher than its lower border. The posterior angle of the fundus and the lowest point of Douglas's pouch are on a level with the upper border of symphysis.

The bladder as well as rectum must be distended to a certain degree in order in a healthy adult to raise the anterior-peritoneal fold materially above the symphysis. Petersen found as an average of ten measurements that with bladder and rectum empty this peritoneal fold extended $2^1/_2$ to 3 ctm. below the crest of the symphysis; in only one case was it on a level with the crest; in ten cases he also found that an injection of 600 ccm. in the bladder raised the fold on an average but 1 ctm. above the crest. P. advised first injecting the bladder, then the rectum; F. reverses the order and recommends first filling the rectum with 450 to 500 ccm., then the bladder with 250 to 300 ccm., thus throwing the strain more on the rectum and elevating the fundus vesicæ better. A better result is secured with stout than with thin subjects.—*Arch. f. klin. Chirg.* 1885. Bd. 32. Hft. III.

II. Operative Treatment of Ectopia Vesicæ. By Prof. TRENDELENBURG. (Bonn.) Former methods are criticised. Thiersch's flap closure, e. g., does not secure use of the bladder musculature. T.'s first attempts to secure direct union of a vesical and urethral fissure by joining its lateral edges were begun five years ago. His plan is by dividing the sacro-iliac synchondrosis on each side to mobilize the iliac flanges and then by lateral pressure to approximate them in front. Finally, the fissure thus narrowed is, after reposition of the bladder, to be directly closed by freshening and suturing its edges. Inferiorly the union is to be continued at least to the beginning of the pars bulbosa urethræ. Division of the sacro-iliac symphysis is in children simple, and, when carefully done, not dangerous. The child is laid on its belly and a finger introduced into the rectum to determine the position of the incisura ischiadica major and superior gluteal artery. A long cut is then made over said symphysis; this is gradually deepened until strong lateral pressure makes the pelvic flange yield. On account of the large pelvic vessels it is not permissible to cut through the deepest portion of the symphysis. Towards puberty and later in life this operation would have to be done with the chisel, and would be more serious. The construction of a continuously active compressing apparatus, that could be tolerated for weeks, proved difficult. Tourniquet arrangements were not borne. A girdle crossing in front, with extension weights of ten to fifteen pounds attached, has of late proven satisfactory. Where previously the spinæ sup. ant. were 17 ctm. apart, they approached to within 11$^1/_2$ ctm. The two pubic symphysis stumps, formerly 5 ctm. apart, were now almost in contact. It is well to delay the operation for the fissure some six or eight weeks. This second operation begins with freshening the fissural borders; he then frees the edges of the bladder somewhat, and unites with Lembert's sutures. The urethra has usually been included in the operation. A catheter is left for a few days. In all cases as yet the union to the extent of urethra and bladder neck has subsequently separated. In a 2$^1/_2$ year old boy the remainder of the bladder held and the prolapse was remedied. He thinks that by further perfecting his operation it may prove successful.—*Centbl. f. Chirg.* 1885 No. 49.

W. Browning (Brooklyn)

III. Operation for Congenital Extroversion of the Bladder of an Infant Five Days Old. By H. C. Wyman, M.D. (Detroit, Mich.) From the umbilicus down to the triangular ligament there was a failure of development causing an extroversion of the posterior wall of the bladder, showing the orifices of the ureters and an absence of the dorsum of the penis. Dribbling of urine from the ureters was constant. Under chloroform incisions were made on either side through the integument and superficial fascia just forward of the anterior superior spine of the ilium two inches upward, to secure relaxation; the edges of the fissure were then pared and fastened together with harelip pins with intermediate sutures, and the wound dressed with oxide of zinc and absorbent cotton, a drainage-tube for the urine being left in the wound. The penis was not touched, being reserved for a secondary operation. The recovery was rapid and perfect. The child died from convulsions two months later, before the operation upon the penis could be performed.—*N. Y. Med. Rec.* 1885. Dec. 12.

IV. Fixation of Floating Kidneys. By L. H. Dunning, M.D. (South Bend, Ind.) The writer concludes from observations upon recently killed animals, supported by one operation in the human body, that the kidney has a normal range of motion in its bed of peri-renal fat, and, considering that the operation for fixing a floating kidney should not interfere with this power, he disapproves of stitching the capsule to the adjacent structures or of any plan to secure its adhesion to the parietes, but recognizes that if the peri-renal fat and capsule are intact—retaining their intimate relation to each other and to the kidney—as may be ascertained when the viscus is exposed, suturing of the fatty envelope fulfills all indications, and is the method to be chosen. *Jour. Am. Med. Assn.* 1885. Dec. 19.

V. Case of Nephrectomy for Calculous Pyelitis. By F. J. Shepherd, M.D. (Montreal). The diagnosis of the case having been narrowed down to a question between tuberculous and calculous pyelitis in the case of a married woman, æt. 24, it was decided to make an exploratory lumbar incision, to be followed by nephrotomy or nephrectomy, as circumstances would demand. The kidney was exposed by an incision extending from the edge of the erector spinæ muscle downward and forward for nearly six inches, and found to contain a calculus and to have been converted into a large sacculated pus-containing bag, as large as a fœtal head, with numerous outlying thin-walled cysts. The wound was enlarged by an incision at a right angle to the original one so that the hand could be introduced. In spite of some troublesome venous hæmorrhages and many adhesions, especially in the lower and posterior part, the kidney was enucleated without injury to the peritoneum or any other important structure, the large cavity caused by its removal being rapidly obliterated by the intestines pushing forward the peritoneum. The wound was irrigated with corrosive sublimate solution, closed, and dressed with iodoform and sublimated dressings, and the patient proceeded to an uninterrupted recovery.—*N. Y. Med. Rec.* 1885. Dec. 12.

VI. Case of Suprapubic Lithotomy—Suture of Bladder Wound—Primary Union. By L. S. Pilcher. (Brooklyn.) The operator presented at a meeting of the New York Surgical Society a patient upon whom, fourteen days before, he had operated for the removal of stone from the bladder by the suprapubic method. The patient had suffered from symptoms of stone about nine years. After etherization, a rubber ball having been introduced into the rectum, it was distended with about ten ounces of water, after which nine ounces of a warm solution of boracic acid were injected Into the bladder through a soft rubber catheter. The result was to cause a very marked protuberance of the bladder above the pubis, and to make exposure of its antero-superior wall, by incision above the symphysis pubis, remarkably easy. The wall of the bladder having been exposed, he followed the suggestion of von Antal, of making an oblique incision through the muscular wall, so as to increase the width of the fresh surfaces afterward to be united by suture. Upon the incision into the bladder being completed, the stone was seized and removed without difficulty. It was of moderate size, weighing 207 grains in its dry state, and was composed of a nucleus of uric acid with an external layer of oxalate of lime principally, with some triple phosphates.

In this case, after removal of the stone, the ease with which the interior of the bladder could be inspected was particularly noteworthy. The posterior wall was clearly visible, and the whole anterior wall was easy of exploration.

The catheter, through which the preliminary injection of boracic acid solution had been made, was left *in situ* to insure continuous drainage of urine; the wound in the bladder was closed by seven or eight points of fine silk suture passing through only the muscular and submucous layers. The suprajacent musculo-tendinous layer was then closed by a running catgut suture; the subcutaneous tissue was then brought together and supported by three harelip pins, and finally a superficial line of sutures was placed through the integumental wound, a little cotton sprinkled with iodoform was laid upon the wound and the man was put to bed. Absolute well-doing attended the after-course of the case; the catheter was removed on the ninth day, and the pins upon the day following. On the eleventh day the man went to his home, permanent primary union throughout the whole extent of the wound, without unpleasant symptoms of any kind having taken place.

VII. Lithotomy Twice Performed in Fourteen Months for Recurring Vesical Calculus. By R. Harrison, F.R.C.S., (Liverpool). A calculus, chiefly phosphatic with a uric acid nucleus, weighing about three ounces, was removed piecemeal by lateral section with some difficulty, because of an enlarged prostate, and the patient was in due time able to return to his work although the wound did not close entirely. About fourteen months later another, a friable phosphatic stone, was discovered and removed by a repetition of the former operation. The writer believes that the nucleus of the stone, although of considerable size, failed to be discovered at the first operation, being concealed by a hypertrophied prostate. He considers this condition to be the most frequent cause of the reproduction of calculus, particularly in elderly pesrons who have been in the habit of voiding calculous matter for years and who cease to do so because of the obstruction exerted by the gland.—*Boston Med. and Surg. Jour.* 1885. Dec. 17.

VIII. Nephrolithotomy. By Dr. L. McLane Tiffany (Baltimore). Reports the case of a male, æt. 26, upon whom he performed an explorative nephrotomy, by the lumbar incision, Feb. 21, 1885; a stone having been detected by exploring the kidney with a needle, the kidney was freely opened lengthwise by the hot blade of Paquelin's cautery and the calculus exposed. This being firmly grasped by the kidney structure, was broken up and scraped away by a sharp spoon, and the debris washed away by means of a syringe. The collected fragments weighed 556 grains—phosphate of lime. Hæmorrhage was insignificant. Drainage. Iodoform dressings. Rapid convalescence, Discharged from the hospital during fourth week. Healing perfect. The author also discusses those cases in which symptoms exist similar to those attending the presence of kidney stones, but in which no stone is found upon incision and exploration of the kidney, though the operation is followed by relief to the pre-existing symptoms. He believes the relief in these instances to be due to free division of the kidney capsule, and the case is comparable to that of the relief brought to an inflamed testicle by division of its fibrous capsule.—*Trans. Amer. Surg. Assoc.* Vol. III. 1885.

IX. Some Points in the Surgery of the Hypertrophied Prostate. By Dr. J. W. S. Gouley (New York). Pays a tribute to the late Dr. Mercier (Paris), to whose researches he believes there is little to be added, and that only by way of detail. Gives hints as to best methods of physical exploration, advising in many cases the use of certain rectangular metallic catheters and sounds, one form of which, resembling a modified lithotrite, he described under the name of a " cysto-pylometer." Describes methods and indications for catheterism and vesical injections and irrigations, and finally treats of the operations of *prostatotomy* and *prostatectomy*. These operations, he believed, should be reserved for cases of crescentic valvular obstructions, and bars of not more than a centimetre in thickness. He advises external prostatotomy by preference. For large sessile supra-montanal growths, he advises very free central incision. He claims priority in the actual performance of the operation of external prostatotomy or prostatectomy.—*Trans. Amer. Surg. Assoc.* Vol. III. 1885.

BONES, JOINTS, ORTHOPÆDIC.

I. Coincident Fracture and Dislocation of the Sternum by Indirect Force. By J. P. Tuttle, M.D., (New York). A man while diving struck head foremost upon the sandy bottom and upon examination was found to have sustained a dislocation of the manubrium upon the gladiolus and a fracture of the latter about an inch and three-quarters lower. The deformity was overcome by placing the patient on his back with a pillow under his shoulders and his head and pelvis resting upon a lower plane. Recovery was complete with but little deformity in four weeks. There was no lesion of any other part, to which unusual fact the recovery of the patient was doubtless due. Although the patient believes that he struck upon his head, the writer doubts it, because of the absence of cerebral and spinal lesions, and considers it more probable that he struck upon his extended hands and that the violence was transmitted through the upper extremities and first ribs to the sternum.—*N. Y. Med. Rec.* 1885. Dec. 19.

II. Fracture of the Coracoid Process. By J. W. Byers, M.D., (Charlotte, N. C.). A review of the literature of the subject reveals a total of but few reported cases, most of which are here cursorily referred to. The case forming the *raison d'être* of this paper occurred in a thin man whose right forearm had recently been amputated a few inches below the elbow. While endeavoring to avoid a passing vehicle, he fell with the stump raised above his head and thrown outward, receiving the violence of the fall on the space corresponding to the deltoid insertion of the humerus and the outer aspect of the shoulder joint. There was no apparent deformity but movement of the stump revealed crepitus, which was readily referred to the coracoid process. The power of shrugging the shoulder was lost, due to the loss of the co-operation of the coraco-brachialis and pectoralis minor muscles—a valuable point in the diagnosis. The fracture was doubtless caused by the head of the humerus being driven violently against the process. The coraco-acromial ligament was thought to have been ruptured, although the coraco-humeral ligament was intact, to which fact the writer attributes the apparent reduction of the fracture produced by outward rotation of the arm. Ligamentous union only—as is almost invariably the result in these cases—was obtained by immobilizing the arm flexed across the breast so as to relax the muscles attached to the process, a position which seemed to secure the least discomfort to the patient. The natural use of the limb was still much impaired a year later.—*Pamphlet.* 1885.

III. The Treatment of Fractures of the Upper Extremities. By S. W. Smith, M.D. (New York). This is a study based upon 100 cases of fracture of the upper extremity, excluding the hand, the majority affecting the clavicle (37) and the radius (34). The former he treats with a "scarf-splint," consisting of a "padded gauntlet-shaped piece of leather, laced to fit the forearm, running on either side back of the bend of the elbow; to this part is attached a strap and buckle; a padded collar with strap, buckle and ring, is fitted to the uninjured shoulder; through this ring the strap from the elbow piece passes, and, by tightly drawing this strap, the arm of the injured shoulder is under sufficient control to bring the fragments into perfect apposition; a sling passes from the ring of the collar on the uninjured side of the neck, for the hand of the injured side." This splint is claimed to meet the indications for throwing the shoulder upward and backward and overcoming all muscular action, without any of the drawbacks attendant upon other methods. His cases of fracture of the radius mostly affected the lower end. He proposes to continue the awkward practice of attaching Colles' name to fractures at this point, but refers the name to the oblique variety only, excluding the transverse or short oblique. In common with the vast army of surgeons who have preceded him, he has invented a splint for the treatment of these fractures, in spite of the fact that they are usually best treated without any splint at all, provided the displacement has once been properly overcome. He refers to Moore's method of treatment with a band of adhesive plaster drawn tightly about the wrist, over a roller bandage, as a compress under the ulua, with disapproval, but fails to mention the method of L. S. Pilcher, an improvement upon Moore's method, and much superior to any splint in ordinary cases—consisting of a strip of adhesive plaster about an inch in breadth, drawn tightly about the wrist at the point of fracture, and covered by a bandage closely encircling the hand, wrist and part of the forearm. By this method alone can the early and frequent motion, which he urges, be satisfactorily obtained.—*N. Y. Med. Rec.* 1885. Dec. 19.

IV. Treatment of Joint Diseases by Rest and Fixation. By De F. Willard, M.D. (Philadelphia.) The writer believes that the application of rest in the treatment of joint diseases should be raised from a secondary to the leading position, and all other methods rendered subsidiary to it, since it subdues joint inflammation more effectually than all other means combined, often aborting, always diminishing an impending process. The more perfect the rest the greater the diminution of pressure, friction, tension and inflammation, and the less resultant ankylosis and suppuration. Counter-irritation is of but secondary importance. In inflammation of the sterno-clavicular, acromio-clavicular and scapulo-humeral articulations, the arm should be fastened to the body, which takes the place of a splint. In elbow disease the member should be fixed in a semi-flexed or extended position;

pressure, aspiration, puncture, drainage, excision, etc., to be used as necessary. In the wrist and hand articulations the same principle is to be enforced. Early exit of pus must be secured antiseptically by the bistoury and the progress of caries carefully watched, the surgeon interfering only when nature is unable properly to accomplish separation or health fails. In the ankle and foot the same principle holds, fixation by plaster or other rigid material being complete and permanent, and locomotion being absolutely forbidden—a rule useful also in the knee and hip. At the knee the question of counter-irritation, immobilization or rest in bed with extension, will depend largely upon the amount of traumatism and the existence of muscular rigidity. When nature indicates by the last mentioned symptom that motion is harmful, delay in enforcing one of the latter measures is criminally negligent. Serious effusion should be aspirated, pus evacuated antiseptically, free drainage maintained and excision practiced as soon as it is decided that destruction has occurred. Permanent rest and fixation with the use of crutches are far better than any form of extension that can be applied in the upright position. In hip disease horizontal extension with fixation answers best in the acute stage. Three months after the cessation of pain, if deformity has been largely reduced, the erect position may be assumed, provided the joint is put at rest by a fixation apparatus and a high shoe and crutches are used.—*N. Y. Med. Jour.* 1885. Dec. 5.

J. E. PILCHER, (U. S. Army).

V. On the Question of Operation in Tuberculosis of the Knee-Joint in Children. By Dr. W. MUELLER. (Göttingen). The later results of the operation, described by Volckmann last year (V. Annals, vol. I, p. 486) as arthrectomy, and practiced in König's clinic since 1881, are here presented, in view of Volckmann's statement of his very favorable results. These represent twenty-three cases of M.'s chef, König. One died from iodoform intoxication, one from chloroform, probably, and two later from tuberculosis—in one of which the knee had remained fistulous—leaving nineteen living and available for the present purpose.

The five operated within a year have remained without any fistula, although one has developed a coxitis and another a vertebral affection.

Fifteen of the whole nineteen were cured locally, the latest four months since, the earliest four years. In five of these fifteen subsequent minor operations—curetting, etc.—have been necessary. Of the other four, two are said to still preserve slightly secreting fistulæ, while two are reported entirely well.

Of eight cases of synovial tuberculosis but one—with large abscesses—failed to give primary. In eight cases with coexistent osseous foci, there were four rapid and four slow cures, besides two others reported cured by parents.

As to the functional result a complete answer can hardly be given until the children have completed their growth. In six only—all of which had osseous foci—of the nineteen, did a firm anchylosis result. In none of the cases examined was there any demonstrable retardation in growth. Despite prolonged immobilization of the joint, some slight motion remained, more frequently when the cure was rapid; in two considerable active extension and flexion was possible. When supports are not worn they show a great tendency to contracture in flexion, just as after resection.—*Centbl. f. Chirg.* 1885. No. 50.

W. Browning (Brooklyn).

GYNÆCOLOGICAL.

I. **Kolpohysterectomy for Cancer.** By S. E. Post, M.D., (New York). This paper is a compilation of the literature of the operation, with tables, constituting a comparison of its results, and concluding that: "1. The results of the operation have progressively improved with the increased number of operations. 2. The total number of operations reported is approximately 341, with a total mortality of 27 per cent; 222 cases were treated with the open peritoneal wound, with a mortality of 22 per cent; of that number the supravaginal wound was covered by peritoneum, with a mortality of 18 per cent; and of the ninety-three, fifty were operated upon during the preceding three years, with a mortality of 10 per cent. 3. Of ninety-seven cases which survived operations done previous to 1883, 18 or 20 per cent are known to have been well at the end of eighteen months or two years. 4. The latest results of kolpohysterectomy for cancer contrast not unfavorably with those of the total extirpation of other organs for malignant disease. 5. The tendency of medical literature is to regard kolpohysterectomy for cancer as a legitimate operation, subject only to the restrictions common to other extirpations for malignant disease."—*Am. Jour. Med. Sci.* 1886. Jan.

II. **Case of Cæsarean Section.** By R. ABERDEIN, M.D., (Syracuse, N. Y.). In the case of a primipara, æt. 29, the completion of labor was found to be rendered impossible by an oval pedunculated intra-uterine tumor (myoma?) six inches long by four thick. Cæsarean section was performed and a healthy child removed through the abdominal incision, but the tumor was left *in situ* and the wound closed antiseptically. The patient rallied well and appeared to be in a fair way to recovery, but suddenly died on the following day from the shock due to the injudicious action of a neighbor, who gave her a detailed account of the operation. It is difficult to understand why the possibility of a recurrence of the trouble in this case was not obviated by the removal of the tumor or by double oöphorectomy.—*N. Y. Med. Jour.* 1885. Dec. 19.

II. **Vulvar and Vaginal Enterocele.** By T. GAILLARD THOMAS, M.D., (New York), Recognizing five varieties of hernia which may appear in the vagina or vulva—(1) cystocele or hernia of the bladder, (2) rectocele, or hernia of the anterior wall of the rectum, (3) vaginal enterocele or descent of a portion of the small intestines into the vagina, (4) pudendal enterocele, pudendal hernia, or descent of the small intestines into the labium majus of one or both sides, (5) Perineal enterocele, perineal hernia, or descent of the small intestines by protrusion through the perineum—he discusses only the last three.

Vaginal enterocele.—is formed by a loop of small intestine pushing the peritoneal lining of the sac of Douglas down, and, infringing upon the vaginal wall, causing it to arch inward until there is formed an intra-vaginal tumor, which sometimes protrudes through the *ostium vaginæ.* The walls of the sac then consist of peritoneum and the inverted vaginal wall. The symptoms apt to develop are: Difficult locomotion, pelvic tenesmus, colicky pains, tendency to constipation and, in time, vomiting; with parturition, liability to obstruct labor is added. A tumor of variable size is found in the vagina; it is soft, supple and yielding, decreases upon pressure, gives a sense of gurgling to the finger if not to the ear, increases upon the patient's coughing or straining, yields resonance upon percussion and is very generally reducible if the patient be placed in the knee-chest position and efficient taxis be practiced. It should be differentiated from prolapsus of the vagina, uterus, bladder or rectum or a combination of these displacements; from vaginal, parovarian or ovarian cyst; from a fibrous tumor low down in the pelvis, a cold abscess of the pelvis or a marked case of tubal dropsy. Two cases of acute vaginal hernia consequent upon traumatism are related and care in manipulating the wall of the vagina inculcated. Vaginal hernia, so long as it remains in the pelvic cavity, is a matter of little moment, since, because of the absence of a neck, it is not prone to strangulation, although it may occur from pressure of the fœtal head, inflammatory processes, fæcal impaction, torsion of the contents of the sac or the existence of a neoplasm.

Pudendal enterocele appears as an elastic tumor about the size of a pigeon's egg, near the middle of the labium majus of one side, and may be formed (1) by the intestines following the course of the round ligament through the inguinal rings and (2) by passing downward between the vagina and the ramus ischii, reaching the labium from within the pelvis; at the beginning, the latter variety exactly resembles vaginal hernia, but instead of inverting the vagina before, it separates the vaginal wall from the ischium and insinuates itself between these parts. The two varieties of pudendal hernia may be differentiated by the fact that in the second, the finger will pass into the pelvic cavity between the ischium and vagina, when pushing the tumor upward, entering the pelvic roof at the level of the os uteri or thereabouts, and the tumor will reappear on coughing, in spite of pressure on the inguinal canal. Diagnosis should be made from cyst or abscess of the vulvo-vaginal gland, cyst of the labium majus or minus, and abscess of the former, fatty or fibrous tumors of the labium and tumors descending from the pelvic cavity. He considers almost pathognomonic of this condition: (1) airy feeling on palpation, (2) gurgling on replacement, (3) diminished tension in the dorsal decubitus, (4) diminution of bulk upon taxis, (5) resonance upon percussion, (6) succussion upon coughing and (7) intestinal pains of a colicky character.

Perineal enterocele in the female consists of the descent of the intestines between the vagina and rectum, posterior to the broad ligament and continuing until the perineal muscles are forced apart and the gut, with its peritoneal envelope, is arrested by the skin. He quotes Astley Cooper's statement that, having reached this point, it does not project as an external tumor, and can be felt in the male from the rectum and in the female from the rectum and vagina.

All these varieties of hernia are readily amenable to taxis, which is greatly facilitated by the genu-pectoral position. In case of strangulation, the surgical practice usual in hernia is indicated. The necessity for this, however, is rare, the greatest danger being attached to errors of diagnosis, by reason of which the tumor may be subjected to operation as a cyst, polypus or fibroid, or an abscess, a number of cases of which are quoted, But one variety, the pudendal, originating from the inguinal canal, can be helped much, and the others can be relieved but slightly by pessaries, pads and other mechanical devices. A case is related of a large vaginal hernia—containing a soft shapeless tumor, probably a local hypertrophy of the pelvic connective tissue in addition to the intestine—in which the author performed laparotomy, emptied and inverted the sac, and, dragging it up, fastened it in the abdominal wound. The patient made a good recovery and, although apprehensive about her future, the author would be inclined to repeat the procedure in a similar case.—*N. Y. Med. Jour.* 1885. Dec. 26.

J. E. Pilcher (U. S. Army.)